REMARKS

Reconsideration of the present application in view of the above amendments and following remarks is respectfully requested. Claims 1-20, 22, 24-26 and 28-42 were pending. As set forth above, Applicants have hereby amended claims 1, 4 (in part), 34-36 and 41 to more clearly define the subject matter encompassed by the Applicants' invention, and claims 4 (in part), 29 and 38 have been hereby amended for mere editorial purposes to correct obvious inadvertent typographical errors. In addition, Applicants hereby submit new claims 43-48. Support for claim amendments and new claims may be found in the specification as originally filed, in part, at page 18, lines 11-26 (*see, e.g.*, claims 1, 4 and 41); and at page 4, line 28 through page 5, line 17; at page 38, lines 13-18; and at page 41, lines 28-30 (*see, e.g.*, claims 34 and 43-48). No new matter has been added. Therefore, claims 1-20, 22, 24-26 and 28-48 are currently pending.

OBJECTION TO AMENDMENT

In the Office Action dated November 12, 2003, the Amendment filed August 28, 2003 was objected to under 36 U.S.C. 132 for introducing new matter. Applicants respectfully disagree with this objection. Nevertheless, however, without acquiescing to the objection, Applicants have removed reference to United States Patent Application Serial No. 09/948,374. Accordingly, Applicants respectfully submit that this objection has been obviated.

REJECTION UNDER 35 U.S.C. §112, FIRST PARAGRAPH

In the Office Action, claims 1-4, 11-20, 22, 24-26, 28-31 and 34-41 were rejected under 35 U.S.C. §112, first paragraph, for lack of written description. More specifically, it is alleged that there is no disclosure supporting the claim limitation "wherein said core cyclic peptide or core antibiotic is not...polymyxin."

Applicants respectfully submit that this ground of rejection has been rendered moot because the term "polymyxin" has been deleted from the claims. Accordingly, Applicants respectfully submit that the instant specification complies with the written description

requirement of 35 U.S.C. §112, first paragraph and, therefore, respectfully request that this rejection be withdrawn.

OBJECTION TO CLAIMS

In the Office Action, claims 4-20, 22, 24-26, 28-36, and 38 were objected to for various informalities.

Applicants wish to thank the Examiner for identifying these obvious inadvertent typographical errors in claims 4, 29 and 38, and for his helpful suggestions. Therefore, Applicants respectfully submit that the claims have been hereby amended as set forth above to incorporate the suggested corrections. Accordingly, Applicants submit that this objection has been obviated.

REJECTION UNDER 35 U.S.C. § 102(b)

In the Office Action, claims 1-4, 12, 30, 31, 34-38 and 40-42 were rejected under 35 U.S.C. §102(b) as anticipated by WO 98/00173 (Zhao *et al.*). In particular, it is alleged that Zhao *et al.* disclose an antibiotic (actinomycin) that can be conjugated through a sulfonamide group to an optionally substituted phenyl or 5- or 6-membered heterocyclic ring, as provided by the instant invention.

Applicants respectfully traverse this ground of rejection and submit that Zhao *et al.* fail to meet every limitation of the instant claims and, therefore, fail to anticipate the claimed invention. The present invention is directed, in pertinent part for this rejection, to an antimicrobial sulfonamide derivative, or a salt or a hydrate thereof, that includes (1) a core cyclic peptide or core antibiotic of an acidic lipopeptide antibiotic (other than laspartomycin); and (2) a lipophilic moiety that is covalently attached to the core cyclic peptide or core antibiotic *via* a linking chain which includes a sulfonamide linkage. In contrast, Zhao *et al.* describe the use of addition of specific moieties to drugs (*i.e.*, intact compounds, not core structures) via a sulfonamide bond to create pro-drugs. As an initial matter, Applicants agree with the Examiner that actinomycin is an antibiotic, and express regret for mistakenly stating otherwise in the previous reply filed with the U.S. Patent and Trademark Office on August 28, 2003. However,

Applicants respectfully reiterate that actinomycin is not a *lipopeptide* antibiotic (or an acidic lipopeptide). Furthermore, Applicants submit that actinomycin is not a core cyclic peptide or a core antibiotic. As described in the specification, a core cyclic peptide or a core antibiotic refers to, for example, the remaining desamino cyclic peptide portion or desamino peptide portion, respectively, of a lipopeptide antibiotic after removal of the lipophilic moiety (*see, e.g.*, specification at page 5, lines 24-30; at page 9, lines 15-18; and exemplified, for example, by structures **4** and **20**). The instant invention includes, in part, a core cyclic peptide or a core antibiotic of an acidic lipopeptide antibiotic with a lipophilic moiety that is covalently attached to the core cyclic peptide or core antibiotic *via* a linking chain that includes a sulfonamide linkage, which results in an antimicrobial sulfonamide derivative of a lipopeptide antibiotic (*i.e.*, a drug). That is, actinomycin is not a core cyclic peptide or a core antibiotic of an acidic lipopeptide antibiotic, and the sulfonimide derivative of actinomycin described by Zhao *et al.* is a pro-drug (not a drug). Therefore, Zhao *et al.* fail to teach or suggest an antimicrobial sulfonamide derivative according to the instant invention.

Accordingly, Applicants respectfully submit that the present invention satisfies the requirements of 35 U.S.C. § 102(b) and, therefore, request that this rejection be withdrawn.

The Commissioner is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

All of the claims pending in the instant application (claims 1-20, 22, 24-26, and 28-48) are now believed to be allowable. Favorable consideration and a Notice of Allowance are earnestly solicited. The Examiner is urged to contact the undersigned attorney if there are any questions prior to allowance of this matter.

Respectfully submitted,

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